

MAR 07 2007

REMARKS

Applicants respond hereby to the outstanding Office Action mailed December 8, 2006, in the above-identified application. Claims 1-8 remain pending hereafter, where claim 1 is the sole independent claim. Each of pending claims 1-8 has been amended in response to the claims objections set forth at paragraphs 4-8 of the outstanding Office Action.

Response To Drawing Objections

At paragraph 1 of the Office Action, the drawings were objected to for including a descriptor 33 in drawing Fig. 1, the textual reference to which was not found by the Examiner in the Specification (description). Applicants respond by adding a sentence to the Specification at page 6, the paragraph beginning at line 22, which identifies element 33 as an input device such as a keyboard, trackball, mouse, etc., for allowing a user to manually enter system control commands and instructions to control ultrasonic system operation.

At paragraph 2 of the Office Action, the drawings were objected to because descriptor ("3") is used two (2) times in Figs. 2/3. The first use of descriptor "3" in Fig. 2 is to identify ultrasonic transducer 3, and the second use of descriptor "3" is to designate a cross-sectional line (3 - 3), from which the Fig. 3 cross-sectional perspective of transducer 3 derives. In response, applicants have amended the Fig. 2 cross-sectional line designator "3 - 3" to -- 3X-3X, -- as shown in the replacement drawing sheet accompanying this Amendment. The Fig. 2 drawing amendment is believed to render clear that cross-sectional line designator -- 3X - 3X -- (as amended) refers to the "cut" that defines the Fig. 3 cross-sectional view of transducer 3.

Applicants have also added text to the Specification at the paragraph beginning on line 8, of page 4, which indicates that the cross-sectional line designator now reads -- 3X - 3X.-- The drawing amendment and change to the specification at page 4 is believed by applicants to render clear the significance of the cross-sectional lines, -- 3X - 3X,-- so that the amended designator should not be confused with the designator 3 for the ultrasonic transducer. Applicants therefore, respectfully request withdrawal of the drawing objections therefore.

Response To Objections To Specification

At paragraph 3 of the outstanding Office Action, the disclosure was objected to because of what the Examiner describes as grammatical errors on page 2, on page 9, on page 14, etc. In response, applicants hereby amend the Specification at page 2, the paragraph beginning at line 13; at page 4, the paragraph beginning at line 8; at page 5, the paragraph beginning at line 22; at page 6, the paragraph beginning at line 10; at page 9, the paragraph beginning at line 2; at page 14, at page 12, the paragraph beginning at line 3; and at page 14, the paragraph beginning at line 11, substantially in accordance with the Examiner's suggestions. Applicants therefore, respectfully request withdrawal of the objections to the Specification.

Response To Claims Objections

At paragraphs 4-8 of the Office Action, the Examiner objects to various claims in view of particular wording that he finds to be "grammatically incorrect." For example, the Examiner objects to claims 5 and 6, asserting that there is insufficient antecedent support for "the acoustic medium." The Examiner objects to claim 1 for what is described and identified as grammatical error, and to claims 2, 7 and 8 for grammatical error. In response, applicants have amended each of pending claims 1-8 substantially in accordance with the Examiner's language, and request withdrawal of the objections to claims 2, 7 and 8.

Response To Rejections Under 35 USC § 103

At paragraphs 9-16 of the outstanding Office Action, the Examiner rejected claims 1-5, 7 and 8 under 35 USC § 103(a) over commonly-owned US Patent No. 5,176,140, to Kami, et al. (Kami), in view of US Patent No. 5,722,644, to Kinoshita, et al. (Kinoshita). The Examiner asserts that Kami discloses an ultrasonic probe (ultrasonic vibrator 5) having a transducer formed of sequential lamination. The Examiner further describes sequential lamination as comprising, with respect to Kami, an acoustic lens (71), an acoustic matching layer (62), a piezoelectric element (61) and a backing member (63), where the backing member is for attenuating ultrasonic waves (col. 14, 10-13) and arranged on a surface opposite the acoustic matching layer and acoustic lens. The Examiner then states that Kami does not disclose "expressly" that the backing

(damping layer) contains a synthetic rubber with a mixture including acrylonitrile-butadiene rubber, ethylene-propylene terpolymer, and at least inorganic fine powders, but that Kinoshita teaches the use of vibration-damping material of a similar mixture, so that at the time of the invention it would have been obvious to combine Kinoshita's vibration-damping material with Kami's ultrasonic vibrator 5 for the benefit of self-adhesive.

In response, applicants respectfully assert that independent claim 1 is not obvious under 35 USC § 103(a) by Kami in view of Kinoshita for at least the following reasons.

Based on a careful analysis of Kami and Kinoshita, applicants respectfully assert that it is improper to combine the references under 35 USC 103(a) for lack of proper motivation to do so under the law. That is, applicants find no motivation in either the Kami or Kinoshita references for making such a combination, and the stated "benefit of self adhesive properties of the [Kinoshita] material (col. 1, lines 65-67) is not sufficient to maintain the stated rejection under Section 103(a).

As understood by applicants, Kinoshita discloses a pre-shaped vibration-damping member for a deformed pipe-branch portion with a contact shape shaped to fit the shape of the deformed portion, and a releasing film. Kami discloses an ultrasonic probe for use in an ultrasonic endoscope that includes an ultrasonic vibrator. Kinoshita's pre-shaped vibration damping member for a deformed pipe-branch portion developed in order to realize a damping member that is readily adhered, and mentions nothing about endoscopes, ultrasonic transducers, etc. Kami's ultrasonic transducer and Kinoshita's pre-shaped vibration damping member were developed to support completely different endeavors. Again, applicants find no motivation to combine the Kinoshita preformed damping member with the Kami ultrasonic transducer to realize an ultrasonic probe as set forth in claim 1 other than by hindsight.

The US Federal Circuit has made clear that although virtually all inventions are combinations of old elements, that an Examiner may often find every element of a claimed invention in the prior art, and to prevent hindsight, the Examiner is required to show a motivation to combine under 103(a). In re Rouffet, 47 USPQ2d 1457-58 (Fed. Cir. 1998). In view of the law, and with all due respect, applicants assert that the Examiner has not his burden of

establishing motivation to combine under the law. Kinoshita's pre-shaped, self-adhesive vibration-damping member for a deformed portion has no relation to laminated transducers formed with a damping layer for use in an ultrasonic probes. The two references are not in the same field of endeavor, and are not disclosed to remedy similar shortcomings.

But even *assuming arguendo* that there is, or could be some reason or motivation to combine that would render such a combination proper on its face under the law, the combination would not read on applicants' invention as claimed. Applicants, therefore, respectfully assert that claim 1 is not obvious in view of the asserted Kami/Kinoshita combination, and request withdrawal of the rejection of claim 1 under Section 103(a). Because claims 2-5, 7 and 8 depend from independent claim 1, these claims are allowable for at least the reasons set forth for the patentability of independent claim 1. Accordingly, applicants request withdrawal of the rejection of dependent claims 1-5, 7 and 8 under Section 103(a) in view of Kinoshita combined into Kami.

At paragraph 17 of the outstanding Office Action, the Examiner rejected claim 6 under 35 USC § 103(a) as obvious by Kami in view Kinoshita, and further in view of US Patent No. 5,884,627 to Wakabayashi, et al. (Wakabayashi). The Examiner asserts that Kinoshita combined into Kami discloses an ultrasonic probe as set forth in claim 1, and that neither Kami nor Kinoshita disclose that the acoustic medium is water with low attenuation to ultrasonic waves. The Examiner then further asserts that Wakabayashi teaches an ultrasonic probe with an exterior cap that immerses the Wakabayashi transducer in water, and that it would have been obvious to combine Wakabayashi's acoustic medium with Kami's ultrasonic transducer as modified by Kinoshita.

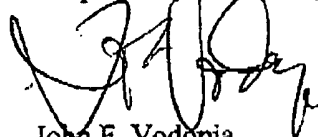
Applicants respectfully disagree with the Examiner's stated argument because they find no motivation to combine the three references in order to realize an invention as defined by applicants' claim 6. As mentioned above, applicants find that Kami concerns ultrasonic probes and that Kinoshita concerns pre-shaped vibration damping members for deformed portions, and that Wakabayashi, like Kami, concerns ultrasonic probes. But the Wakabayashi ultrasonic probes were developed to include a property of spontaneous polarization, and therefore not the same field of endeavor of Kami or Kinoshita. Kinoshita's deformed portions were developed for

a completely different purpose than Wakabayashi's spontaneous polarization transducer. Hence, each of the three inventions cited in each of the three cited patent references were developed to address very different problems and endeavors, and do not include motivation for making the asserted Section 103(a) combinations.

With all due respect, the Examiner has not his burden of establishing motivation to combine under 35 USC § 103(a). But even *assuming arguendo* that there is, or could be some reason or proper motivation to combine the three references under the law, the combination would not read on applicants' invention as per claim 6. Applicants, therefore, respectfully assert that claim 6 is not obvious in view of the asserted Kami/Kinoshita and Wakabayashi combination for at least the reasons set forth above in response to the Section 103(a) rejection of claim 1 in view of Kami and Kinoshita, and request withdrawal of the claim 6 rejection thereunder.

If the Examiner believes that a telephone conference with applicants' attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,



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JFV:gc
Attachment: Replacement Drawing Sheet